GUIDELINES

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Dharmacon™ DharmaFECT™ Transfection Reagent Cell Type Guide

Abstract

Choose Dharmacon™ DharmaFECT™ 1, 2, 3, or 4 for optimal transfection of siRNA or miRNA reagents. The table below lists validated Dharmacon Transfection recommendations (96-well format) to help you select the appropriate DharmaFECT formulation for your research. Recommendations are based on highest cell viability and knock down, with lowest amount of lipid used for validation.

All conditions listed resulted in control gene silencing of 85% or better and viability of 80% or better in a 96-well format. All experiments were done in 96-well plates with Non-targeting control siRNA and Cyclophilin B or GAPD Control pools at 25 nM. Alamar Blue (viability) and knockdown measured at 24 hr. Data normalized to untransfected for viability and both untransfected and Non-targeting control for knockdown. Transfection conditions should always be re-evaluated in the context of a new plate format or assay-specific requirements for cell density.

Cell line	Cell type	Recommended DharmaFECT formulation	DharmaFECT volume/well (µL)	Plating density/well	Additional Successful DharmaFECT formulations
Human					
A549	Lung carcinoma	1	0.2	1×10^4	2, 3, 4
BxPC3	Pancreas adenocarcinoma	2	0.2	5×10^3	1, 3, 4
DU 145	Prostate carcinoma	1	0.2	1×10^4	2, 3, 4
HEK293	Kidney transformed embryonic cells	1	0.2	1×10^4	2, 4
HeLa	Cervical epithelial adenocarcinoma	1	0.2	5×10^3	2, 3, 4
HeLa S3	Cervical epithelial adenocarcinoma	4	0.4	5×10^3	1, 2, 3
Hep G2	Hepatocellular carcinoma	4	0.4	1×10^4	1, 2
H1299	Lung carcinoma	2	0.2	1×10^4	4
HT1080	Fibrosarcoma	4	0.2	5×10^3	1, 2, 3
HT - 29	Colorectal carcinoma	1	0.2	5×10^3	2, 3, 4
MCF7	Breast adenocarcinoma	1	0.2	1×10^4	2, 4
MCF - 10a	Breast adenocarcinoma	1	0.2	1×10^4	2

Cell line	Cell type	Recommended DharmaFECT formulation	DharmaFECT volume/well (µL)	Plating density/well	Additional Successful DharmaFECT formulations
Human					
MDA-MB453	Breast adenocarcinoma	2	0.2	1×10^4	1, 3, 4
hMSC	Mesenchymal stem cells	1	0.4	5×10^3	2, 3, 4
PC - 3	Prostate carcinoma	2	0.2	1×10^4	3
SKBR3	Breast adenocarcinoma	2	0.2	1×10^4	1, 3, 4
786 - 0	Kidney adenocarcinoma	1	0.4	5×10^3	2
HCT-116	Colorectal carcinoma	2	0.1	5×10^3	4
MDA-MB-231	Breast adenocarcinoma	4	0.1	5×10^3	1
Huh7	Hepatoma	4	0.05	5×10^3	1, 2
SKOV-3	Ovarian adenocarcinoma	3	0.4	1×10^4	1, 2, 4
DLD-1	Colorectal adenocarcinoma	2	0.4	5×10^3	1, 3
OVCAR 3	Ovarian adenocarcinoma	1	0.1	5×10^3	2, 3, 4
HUVEC	Human umbilical vein endothelial	4	0.2	2×10^4	1, 2
u-87 MG	Brain glioblastoma	1	0.1	5×10^3	2, 3, 4
JEG-3	Placenta, choriocarcinoma, epithelial	3	0.2	1×10^4	-
LNCaP	Prostate carcinoma	2	0.2	1×10^4	1, 3
ARPE19	Retinal pigment epithelial	4	0.2	1×10^4	1, 2
Saos-2	Bone, osteosarcoma, epithelial	1	0.05	1×10^4	2, 3, 4
Rodent					
A7R5	Rat aortic smooth muscle	2	0.1	5×10^3	1
C2C12	Mouse myoblasts	1	0.2	5×10^3	2, 3, 4
CHO K1	Chinese hamster ovary	1	0.4	1×10^4	2
ES - D3	Mouse embryonic stem cells	1	0.2	2×10^3	2
ES - E14TG2a	Mouse embryonic stem cells	1	0.2	2×10^3	2
H9C2	Rat heart myoblasts	1	0.2	1×10^4	2, 3, 4
J774	Mouse macrophage	4	0.2	1×10^4	-
NIH / 3T3	Mouse embryonic fibroblast	1	0.2	1×10^4	3
NRK - 49F	Rat kidney fibroblast	2	0.2	1×10^4	1, 4
RAT2	Rat fibroblast	1	0.2	2×10^4	2
3T3 L1	Mouse embryonic fibroblast	1	0.2	5×10^3	3
Other					
COS 7	African green monkey kidney	2	0.4	5×10^3	1, 3, 4

If you have any questions

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